

XXXIV.—*With the Tropic-birds in Bermuda.*

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(Plates XXI.—XXIV.)\*

DURING a recent visit to Bermuda, that idyllic archipelago in the Atlantic, I had numerous opportunities of observing the beautiful Tropic-bird known locally as the "Long-tail" or "Bo'sun-bird." Little has been written of these wonderful creatures, which choose Bermuda as their most northern breeding-place. Occasionally they are seen on American sea-coasts, but then it is probable that they have been blown in by severe storms.

The Yellow-billed Tropic-bird (*Phaëthon americanus* O.-Grant) is the most abundant of the sea-birds of Bermuda, and is the most conspicuous by reason of its colour and its numbers. It is only seen there, however, between February and October; after the latter month it migrates south to the West Indies, where a larger species, the Red-billed Tropic-bird (*P. ætherius*), is also found. Another sea-bird, the Audubon's Shearwater (*Puffinus lherminieri*), occasionally breeds in limited numbers in the same localities with the Tropic-birds, but it is so very rare and so seldom seen that very few people are aware of its existence there at all.

The first glimpse I had of a living Tropic-bird was on the morning we first sighted land *en route* to Bermuda from New York. It was flying along in its characteristic manner, not unlike a white Pigeon, and the purity of its plumage and the long willowy tail-feathers excited the admiration of the passengers. We had experienced a rough sea, and that morning found us all with that peculiar feeling of relief which most of us experience after leaving the horrors of sea-sickness behind. I had escaped it, but one of the passengers afterwards confided to me that it was the most terrible thing he had been through—one moment he thought he would die and the next feared that he would not! Even a small school of whales and the numerous flying-fish, as well

\* For explanation of the plates see p. 559.



PHAËTHON AMERICANUS.



PHAËTHON AMERICANUS



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EGG AND NESTLING OF PHAËTHON AMERICANUS.



as the Storm-Petrels following the boat, failed to dissipate the indifference of the afflicted passengers.

Bermuda is composed of a few large islands and a great many smaller ones, about 150 in total number; the whole group forms a land-area of but nineteen or twenty square miles. It may be roughly compared to a fish-hook in shape—the part forming the hook lying to the south-west and the other end extending diagonally to the north-east.

I made my headquarters at three of the principal towns during my quest of the birds. These were St. George's, Hamilton, and Somerset. St. George's, located at the northern end, is a quaint old town, the population being mostly coloured. It was formerly the capital. Hamilton is the present capital, and has the only practical harbour. It is more modern than the other towns, and is situated near the centre of the group. Somerset is a small place near the south-western end.

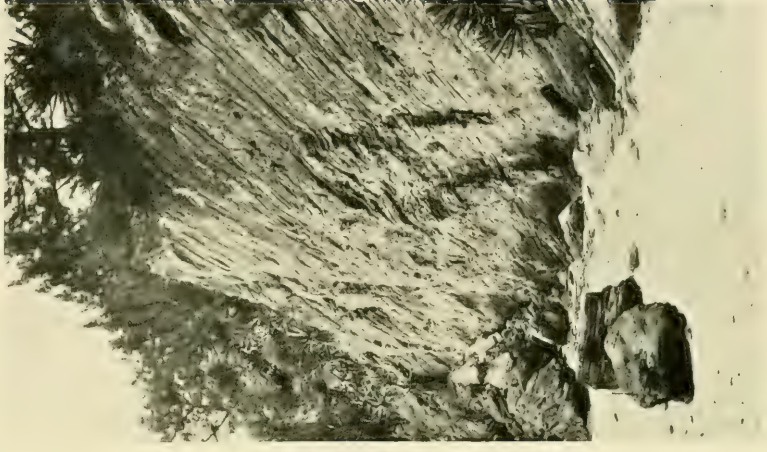
It was to Somerset I repaired after tarrying in Hamilton a few days. The shores at Somerset are very rocky and steep. On the morning of my arrival there I saw a flock of ten or twelve Tropic-birds in the air, wheeling in graceful curves and continually uttering their peculiar cries of "tik-et, tik-et . . . tik-tik," a chorus of these sounds in varied pitches similar to the noise made by a creaking pulley. Their long tail-feathers are very flexible, and sometimes, when making a sudden turn or encountering a stiff breeze, they would bend almost at right angles. Against the blue sky the whiteness of their plumage is dazzling, but when the cliffs formed a background their underparts appeared of a beautiful pale green, which was due to the reflection of the bright emerald of the water below them.

They were frequently seen flying over the small islands in Elie's Harbour, which is at the south-west of Somerset Island; so one morning my companion and I rowed over to the group. We passed the curious and beautiful Cathedral Rocks—a peculiar rock-formation worn into its gothic resemblance by erosion of wind and water. On reaching the islands we found that on the harbour side they sloped

gently to the water's edge, and were covered with a rank growth of the Bermuda cedar, varied with palmettos, century plants, and the too-abundant prickly pear. On the ocean side they terminated abruptly in steep and almost inaccessible cliffs of rock (Plate XXIV. fig. 2). Tropic-birds were flying all about, occasionally sailing into their holes in the cliffs. There were a number of holes in the sandstone, and in several we could dimly see the birds a few feet back. Finally, a bird on its nest was discovered on a narrow ledge in a miniature cañon. The bird made no attempt to fly, and after photographing it from a distance of six feet, I approached near enough to actually touch it. Even then it made no effort to leave its nest, but repeatedly struck at my offending hand with its open beak, and uttered a harsh, peevish cry. The long tail was bent over, and a long feather in the nest seemed to indicate the fate of the long tail-feathers, for afterwards nearly every nest seen was ornamented with one or two, which had dropped from the bird owing to its cramped position on the nest. I had noticed that the birds flying about seemed to have orange-red bills rather than the yellow to which they owe their name, and this bird certainly had a red bill. I called the attention of my companion to it, and we agreed that it could be best described as bright orange-red, inclining to vermilion on the upper ridge. This statement is not in accord with any descriptions I have read of this species, which describe the bill as pale or orange-yellow. A few of the several hundred of the birds seen (about eight or nine) had yellow bills, but these I judge had not attained their full coloration, though they were breeding.

Graceful as they are in the air, on the ground they are extremely awkward, and seem to have difficulty in making any progress over the rocks. They creep along on their breasts, pushing with their webbed feet, sometimes aided by their wings, and on one occasion I saw one hop or rather bounce along over the soft sargassum weed, which covered the floor of the cave in which it had its nest. I never saw one standing up on its legs as do the Gulls and Terns; they always seemed to be sitting, and no doubt their legs

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NESTING SITES OF PHAETHON AMERICANUS.



are so absurdly small that they are too weak to hold them up.

The birds being so tame—or, rather, fearless—while on their nests, I had splendid opportunity to observe their coloration. The plumage of head and breast has an exquisite satiny sheen, which loses some of its lustre after the bird is dead. The general colour is snowy-white, varied with jet-black on sides of head and the wings and with dark grey on the flanks. In fully adult birds there is a beautiful tint of delicate salmon-pink, which suffuses the sides of the neck and the long feathers of the tail. The upper sides of the tail- and wing-shafts are black, fading to white at the tips. The feet, the four toes of which are connected by one web, are black, the tarsus being bluish white. In size they may be compared to a large Pigeon, but their extent of wing is much greater, being about 38 inches. If I chanced to visit a nest while the parents were absent, the returning bird would hover in the air above me or else soar about, but would not alight. As soon as I left the vicinity and got into my boat it would sail down, and, after alighting, would creep awkwardly to the nest, turning round several times before finally settling down.

But one egg is laid, which averages  $2\frac{1}{8}$  inches in length by  $1\frac{1}{4}$  inches in breadth. The colour is light purplish brown, thickly speckled, especially at the larger end, with a darker shade. Both sexes incubate, and, when the birds relieve each other, they would caress one another, meanwhile uttering sounds reminiscent of the “Flicker” (the Golden-winged Woodpecker), “flee-ker—flee-ker,” and the relieved bird would depart soon after. The young bird is downy and white, with dark-coloured skin around the bill and eyes (Plate XXIII.).

One would not suspect these elegant creatures of being related to the clumsy Pelicans, but they belong to the same group, and also have a gular pouch, but it is fully feathered and not at all conspicuous. For the first few days the young bird is fed on regurgitated juices and partly-digested food from the pouch of its parents. Later on it is fed on more solid food, such as squids, minnows, flying-fish, &c. Squids

appear to be the favourite food, and for this reason the abundant Tropic-bird is not especially popular with the fishermen, who find the squid a most invaluable bait.

After a few weeks the little chick is left much alone, the parents visiting it with food but two or three times a day. The time spent in the nest is about two months, and the young bird is then practically fully feathered.

The old birds would not leave their nests while I was in the vicinity, so I took advantage of this and made several sketches in colour. One bird actually sat for me for a space of three hours while I painted its portrait, life-size, and it proved an excellent model. My presence did not affect it, although the restlessness of the inquisitive little chick, which insisted on poking its head out and watching me, caused the mother to remonstrate with a guttural "kuk-kuk," and tuck the little fellow under her breast or wing.

Another nest was in a fissure of rock, and here I found a newly-hatched bird and its red-billed parent. The old bird had a tail which measured twenty-two inches, which is about four inches above the average, and had a very deep rosy tint on the neck, scapulars, and tail. After removing her from the nest she fluttered down to the water, floating very high with her tail raised almost vertical, and, with much flapping, finally rose in the air and flew gracefully away. I returned to the young bird, and placed it in the open to photograph it. While setting the camera, the little one lost its balance and tumbled down about four feet, landing on the sharp rock. I expected it to be killed, but it was still alive, so I placed it back in the nest. Returning two days later, I found its parents absent, but the youngster was apparently all right, being quite perk and lively. On a subsequent visit, to my surprise, I found a yellow-billed bird with a shorter white tail on the nest, it being probably the other parent of the young one, which seemed none the worse for its accident.

After spending some time among the birds in the harbour, I moved over to St. George's, taking the stage or bus from Hamilton: the distance is twelve miles from Hamilton and the fare a shilling. The ride along the fragrant oleander-

bordered road is surely delightful and amusing, for the bus carries anything and everything—passengers, black and white, crates of live fowls, onions, baby-buggies, groceries, &c.—all jumbled in regardless, and the merchandise is delivered along the road.

At St. George's I became acquainted with a gentleman whose son was caretaker of one of the larger islands in Castle Harbour, which lies just beyond St. George's Harbour. It is studded with many islands, on which the "long-tails" are very numerous. After my assuring him that I did not want the birds for millinery purposes, he agreed to speak to his son and arrange for me to go over to the island, where I could study the birds to advantage.

A few days later, during which we had a terrific wind-storm, I started for the island. Taking a ferry-boat over to St. David's, I walked across that island, following a narrow footpath, which led past a swampy tract where I saw an American Egret, a rare visitor to Bermuda. On reaching the shore I met the gentleman in his motor-boat, and we started off. Suddenly the power gave out, and after several hours of paddling in the choppy sea, we drew near to the island with its forbidding cliffs. I wondered where we would land, but soon saw a concrete dock with stairs which led to the top of the cliffs. Here we found my friend's wife and family, and a charming little cottage and garden overlooking the sea. There were several of the dainty English Goldfinches flitting about. They are quite abundant in Bermuda, and their cheerful song is very pleasant to hear.

After a refreshing lunch, we started in a row-boat for one of the numerous small islands close by. It was difficult to keep a straight course, and as we drew near to our destination, it became a problem as to how we would land. The huge waves would dash us in with great danger of smashing the boat, and then quickly sweep us out again. We finally decided that I was to throw my sketching materials and camera on to one of the flat rocks above the line of the surf and then jump. I succeeded in the first well enough, but before I had time to jump, another wave came from behind

and I was in the water. I made a wild grab for the rocks and drew myself up, but not without many cuts and bruises, for the rocks about Bermuda are the most treacherous I have ever seen. I managed to catch the rope, and pulled the boat in to enable my guide to land, and after fastening it to prevent it from being dashed against the rocks, we started to explore.

A gleam of white under a projecting rock attracted our attention, and investigation proved it to be an old bird and a young one about ten days old. The mother's wing protectively encircled her chick, and on our approach she uttered her peevish cry, which the youngster feebly tried to imitate. However, I proceeded with the photographing, and succeeded in getting a fairly good result in spite of the darkness of the nesting-cavity.

The nests on these islands are placed in quite different locations from those seen in Elie's Harbour. The islands in Castle Harbour are low and comparatively flat, and are composed almost entirely of sharp coral rock. On some of the islands (these are the very small ones and uninhabited) the rocks are covered with a long, coarse grass, and in this were a few nests entirely hidden. Several times the harsh cry of a bird, almost under my feet, prevented my treading on it. Nests were also placed under the decorative Bermuda cedar shrubs, which formed a beautiful background to the bird.

My guide, who had studied the birds for years, gave me much interesting information regarding them. He said that they returned year after year to the same nesting-place; he had placed a wire ring on a bird's foot, and observed that it returned for three successive seasons. They attain their red bills and full plumage in their third year. To determine the time of incubation he procured a freshly-laid egg and placed it in an incubator. It hatched after a period of twenty-eight days.

On another island comparatively bare of vegetation, I found peculiar tunnels in the rock close to the surface—in some places broken through and exposed to the light. Nearly every opening showed a brooding Tropic-bird beneath

it. In some of these tunnels I found nests of the Shearwater, about six or seven in total number. My guide quaintly called them the "dusty-sheah-watahs," and seemed to think them vastly more attractive than the lovely Tropic-birds, probably because of their rarity. The few nests found of the Shearwater we supposed to be the only ones in Bermuda, and diligent search on the neighbouring islands failed to reveal any more. The Shearwater is more active at dusk, when its uncanny cries are heard over the outer islands. It is about the same size as the Tropic-bird, but in appearance very different. It has a short tail and a hooked beak, the nostrils placed in a double tube. The plumage is sooty-brown above and white beneath; the feet are webbed and black and white in colour.

In each of these nests, together with the half-grown young birds, I found a white egg, but these were all cracked and spoiled. They were about the same size as those of the Tropic-bird, but narrower. The young Shearwaters are of a smoky-grey with whitish underparts. They would try to peck me when I touched them, but their strenuous efforts failed to even pinch.

Several years ago a foreign millinery concern offered prices for heads, wings, and tails of Tropic-birds, but they are now protected, and certainly do add to the attractiveness of Bermuda, of which they are so striking a feature.

#### EXPLANATION OF PLATES.

PLATE XXI. *Phaëthon americanus* brooding on nest, her mate about to relieve her. From a sketch made by the author at Bermuda.

XXII. *Phaëthon americanus*. Photograph of female and young bird on Morgan's Island, Bermuda, May 1913.

XXIII. Fig. 1. *Phaëthon americanus*. Photograph of a young bird about 10 days old. Nonsuch Island, Bermuda, June 1913.

Fig. 2. Egg and nest of *Phaëthon americanus* on Morgan's Island, Bermuda, May 1913.

XXIV. Fig. 1. Nesting site of *Phaëthon americanus* on Nonsuch Island, Bermuda, showing a bird in flight, May 1913.

Fig. 2. Limestone cliffs on Somerset, Bermuda; the Tropic-birds nest in holes in these cliffs.